AMENDMENTS TO THE CLAIMS

1. (currently amended) A process for obtaining porous propylene polymers optionally containing up to 10% by mol of derived units of at least one alpha-olefin of formula CH_2=CHZ wherein Z is H or a C_2-C_{10} alkyl radical, comprising the step of polymerizing, in a polymerization medium, propylene and optionally said at least one alpha-olefin, under polymerization conditions, in the presence of a catalyst system comprising at least a metallocene compound wherein:
   a) the catalyst system is supported on an organic porous polymer; and
   b) at least part of the polymerization reaction is carried out in the presence of hydrogen,

   wherein the organic porous polymer support has porosity due to pores with diameter up 10 μm (100000 Å) higher than 0.1 cc/g.
2. (previously presented) The process according to claim 1 wherein the polymerization medium is liquid propylene optionally containing minor amounts of an inert hydrocarbon solvent or at least one comonomer of formula CH_2=CHZ.
3. (currently amended) A process for obtaining a porous propylene polymer optionally containing up to 10% by mol of derived units of at least one alpha-olefin of formula CH_2=CHZ wherein Z is H or a C_2-C_{10} alkyl radical, comprising the following steps:
   a) prepolymerizing in a first polymerization medium propylene optionally with at least one alpha-olefin of formula CH_2=CHZ wherein Z is H or a C_2-C_{10} alkyl radical in the presence of a catalyst system supported on an organic porous polymer, said catalyst comprising a metallocene compound; wherein the first polymerization medium is liquid propylene,

      wherein the organic porous polymer support has porosity due to pores with diameter up 10 μm (100000 Å) higher than 0.1 cc/g; and
   b) contacting propylene and optionally at least one alpha-olefin of formula CH_2=CHZ wherein Z is H or a C_2-C_{10} alkyl radical under polymerization conditions in the presence of hydrogen and the prepolymerized catalyst system obtained in step a), in a second polymerization medium.

4. (previously presented) The process according to claim 3 wherein the second polymerization medium is liquid propylene optionally containing minor amounts of an inert hydrocarbon solvent or at least one comonomer of formula CH_2=CHZ.

5. (canceled)

6. (currently amended) A process for obtaining porous propylene polymers optionally containing up to 10% by mol of derived units of at least one alpha-olefin of formula CH_2=CHZ wherein Z is H or a C_2-C_{10} alkyl radical, comprising the step of polymerizing, in a polymerization medium, propylene and optionally said at least one alpha-olefin, under polymerization conditions, in the presence of a catalyst system comprising at least a metallocene compound wherein:

a) the catalyst system is supported on an organic porous polymer; and

b) at least part of the polymerization reaction is carried out in the presence of hydrogen, wherein in the organic porous polymer support, a total porosity due to all pores whose diameter is comprised between 0.1 μm (1000 Å) and 2 μm (20000 Å) is at least 30% of a total porosity due to of all pores whose diameter is comprised between 0.02 μm (200 Å) and 10 μm (100000 Å).

7. (previously presented) The process according to claim 1 wherein an amount of hydrogen present during the polymerization reaction is more than 1 ppm.

8. (previously presented) The process according to claim 1 wherein the catalyst system containing the metallocene compound is obtained by reacting:

a) the metallocene compound;

b) at least an alumoxane or a compound that forms an alkylmetallocene cation; and

c) optionally an organo aluminum compound.

9. (previously presented) The process according to claim 8 wherein the catalyst system is supported on an organic porous polymeric support according to a process comprising the following steps:

(a) preparing a catalyst solution comprising the catalyst system and a solvent;

(b) introducing into a contacting vessel:

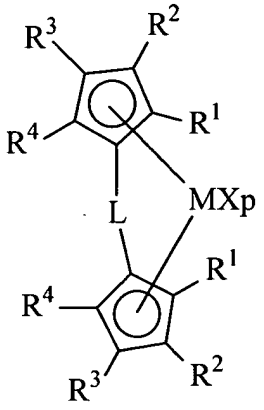
(i) a porous support material in particle form having a total pore volume, and

(ii) a first volume of the catalyst solution not greater than the total pore volume of the porous support material introduced;

(c) discharging the material resulting from step (b) from the contacting vessel and suspending it in an inert gas flow, under such conditions that the solvent evaporates; and

(d) reintroducing at least part of the material resulting from step (c) into the contacting vessel together with a second volume of the catalyst solution not greater than the total pore volume of the reintroduced material.

10. (previously presented) The process according to claim 1 wherein the metallocene compounds belong to formula (I):



(I)

wherein

M is a transition metal belonging to group 4, 5 or to the lanthanide or actinide groups of the Periodic Table of the Elements;

the substituents X, equal to or different from each other, are monoanionic sigma ligands selected from the group consisting of hydrogen, halogen, R^6, OR^6, $OCOR^6$, SR^6, NR^6_2 and PR^6_2, wherein R^6 is a linear or branched, saturated or unsaturated C_1-C_{20} alkyl, C_3-C_{20} cycloalkyl, C_6-C_{20} aryl, C_7-C_{20} alkylaryl or C_7-C_{20} arylalkyl group, optionally containing at least one Si and Ge atom;

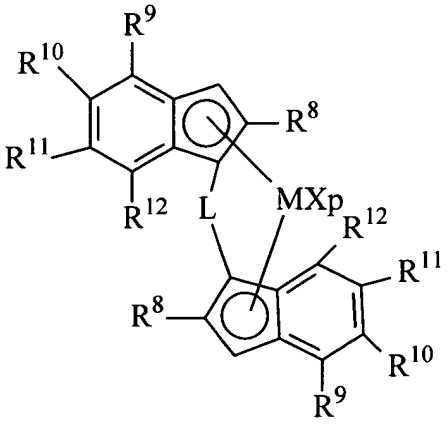
p is an integer equal to the oxidation state of the metal M minus 2;

L is a divalent bridging group selected from C_1-C_{20} alkylidene, C_3-C_{20} cycloalkylidene, C_6-C_{20} arylidene, C_7-C_{20} alkylarylidene, or C_7-C_{20} arylalkylidene radicals optionally containing heteroatoms belonging to groups 13-17 of the

Periodic Table of the Elements, and silylidene radical containing up to 5 silicon atoms;

R^1, R^2, R^3 and R^4, equal to or different from each other, are hydrogen atoms, or linear or branched, saturated or unsaturated C_1-C_{20}-alkyl, C_3-C_{20}-cycloalkyl, C_6-C_{20}-aryl, C_7-C_{20}-alkylaryl, or C_7-C_{20}-arylalkyl radicals, optionally containing at least one heteroatom belonging to groups 13-17 of the Periodic Table of the Elements; or two adjacent R^1, R^2, R^3 and R^4 form at least one 3-7 membered ring optionally containing heteroatoms belonging to groups 13-17 of the periodic table; said rings can be substituted by at least one hydrocarbon radical containing from 1 to 20 carbon atoms ring optionally containing heteroatoms belonging to groups 13-17 of the periodic table.

11. (previously presented) The process according to claim 10 wherein the metallocene compounds belong to formula (II):



(II)

wherein

R^8, equal to or different from each other, are linear or branched, saturated or unsaturated C_1-C_{20}-alkyl, C_3-C_{20}-cycloalkyl, C_6-C_{20}-aryl, C_7-C_{20}-alkylaryl, or C_7-C_{20}-arylalkyl radicals, optionally containing at least one heteroatom belonging to groups 13-17 of the Periodic Table of the Elements;

R^9, R^{10}, R^{11} and R^{12}, equal to or different from each other, are hydrogen atoms, linear or branched, saturated or unsaturated C_1-C_{20}-alkyl, C_3-C_{20}-cycloalkyl, C_6-C_{20}-aryl, C_7-C_{20}-alkylaryl, or C_7-C_{20}-arylalkyl radicals, optionally containing at

least one heteroatom belonging to groups 13-17 of the Periodic Table of the Elements; or they can join to form a condensed 4-7 membered ring.

12. (previously presented) A propylene polymer optionally containing up to 10% by mol of derived units of at least one alpha-olefin of formula CH_2=CHZ wherein Z is H or a C_2-C_{10} alkyl radical having the following features:
    (i) a melting point >100°C;
    (ii) a total porosity expressed as percentage of voids %V/V_1 >15; and
    (iii) a molecular weight distribution Mw/Mn<4.

13. (new) The process of claim 6 wherein the total porosity due to all pores whose diameter is comprised between 0.1 μm (1000 Å) and 2 μm (20000 Å) is at least 40% of a total porosity due to of all pores whose diameter is comprised between 0.02 μm (200 Å) and 10 μm (100000 Å).

14. (new) The process of claim 6 wherein the total porosity due to all pores whose diameter is comprised between 0.1 μm (1000 Å) and 2 μm (20000 Å) is at least 50% of a total porosity due to of all pores whose diameter is comprised between 0.02 μm (200 Å) and 10 μm (100000 Å).